

ABSTRACT

A capacitive sensor system for controlling operation of a device in response to a rate of change in capacitance due to motion of a proximate object includes at least two sense electrodes disposed on a surface and a phase locked loop, including a voltage controlled oscillator and a phase/frequency comparator, connected between the sense electrodes and an RC network for providing an operating frequency to the sense electrodes. A circuit loop, including a reference oscillator, provides a fixed frequency reference for the phase locked loop to follow and a phase delay circuit connected between said phase/frequency comparator and said voltage controlled oscillator causes the voltage controlled oscillation to run ahead of the reference oscillator. A trigger circuit provides a control output in response to a change in phase shift between said fixed frequency and said operating frequency.